Cancer Nursing Practice

Evidence and practice/research

Effects of a face-to-face education session on oncology professionals’ perceived confidence and competence to communicate with parents who are diagnosed with cancer

Semple C, McCaughan E, Smith R (2017) Effects of a face-to-face education session on oncology professionals’ perceived confidence and competence to communicate with parents diagnosed with cancer. Cancer Nursing Practice.

date of submission 15 February 2017; date of acceptance 21 April 2017; doi: 10.7748/cnp.2017.e1406

Cherith Semple

Macmillan head and neck clinical nurse specialist/ Ulster University honorary fellow,
South Eastern Health and Social Care Trust/Ulster University, Cancer Services, Ulster Hospital
Belfast, Northern Ireland

Eilis McCaughan

Professor of Cancer Care, Ulster University, Belfast, Northern Ireland

Rachel Smith

Family service coordinator, Cancer Focus Northern Ireland, Belfast, Northern Ireland

Correspondence

Cherith.Semple@setrust.hscni.net

Conflict of interest

None declared

Peer review

This article has been subject to external double-blind peer review and checked for plagiarism using automated software

Acknowledgement

This study was supported with funding as part of a Knowledge Exchange Scheme grant from the Research and Development Office, Public Health Agency, Northern Ireland

Abstract

Aims When parents of young children are diagnosed with cancer, there is an immediate and devastating effect on families, therefore good communication between oncology professionals and parents, at this critical juncture, is vital. However, family-centred communication can be inadequate, often because professionals lack knowledge and confidence. The aim of this study was to evaluate the effects of a face-to-face education session on oncology professionals’ perceived confidence and competence to communicate with parents diagnosed with cancer.

Methods A face-to-face education intervention was developed and delivered to frontline oncology staff, about the effects of parental cancer on families, and how healthcare professionals can empower parents to communicate with, and support, their children. The study used a pre-test post-test design. A Likert-style survey was developed for this study to evaluate the education sessions. Data were analysed using descriptive and inferential statistics.

Results 35 education sessions, with 259 participants, were conducted across five NHS trusts in Northern Ireland. Participants’ perceived level of confidence to engage in conversations with patients about parental cancer, and sharing the diagnosis with children, improved significantly, and their perceived competence scores on to how to handle difficult questions also increased.

Conclusion Staff education on managing parental cancer is likely to increase their knowledge and confidence. This will support family-centred communication, promote family cohesion, and reduce distress. Training like this should be embedded in a clinical context, and informed by evidence.

cancer, cancer nursing practice, communication, family cohesion, family-centred care, education, parents

Introduction

It is not uncommon to be a parent of young children and have a cancer diagnosis, mainly due to postponing parenthood to later in life, and the increased risk of developing cancer across the lifespan [O’Neill et al 2013]. One population-based study found that up to one in five patients with cancer are parents of children under the age of 18 in the US, which equates to 1.5 million cancer survivors (Weaver et al 2010). In Finland, 6.6% of children born in 1987, and followed up in a cohort study, had a parent with cancer (Niemela et al 2012), while approximately 4% of children aged nought to 25 in Norway have experience of a parent diagnosed with cancer (Syse et al 2012).

At present, there are no comparable statistics in the UK, however 10% of people diagnosed with cancer are between the ages of 25 and 49 (Cancer Research UK 2016), an age range likely to include parents of young children. These studies suggest that many families are affected by parental cancer.

Literature review

Parents with cancer

When parents are newly diagnosed with cancer, this has an immediate, devastating, and profound effect on them and their dependent children, and risks psychosocial distress (Semple and McCaughan 2013). Parents with cancer face many challenges, as they struggle to negotiate family routines while receiving treatment and managing the side effects (Helseth and Ulfsaet 2005, Semple and McCance 2010).

A main concern for parents is how best to communicate their diagnosis to their children. In this unique situation, many parents do not know how best to share their cancer diagnosis with their children, and have a strong desire to protect them. Parents often worry that telling their children about their cancer diagnosis will be too upsetting, and that the children might not be able to cope with this difficult news (Semple and McCance 2010). Therefore, communication with children about parental cancer is often limited (Grant et al 2016).

Lack of open and honest communication within families correlates with poorer family cohesion, and higher levels of psychological distress for children, while being well informed can improve children’s coping strategies (Huizinga et al 2003). Children need to know that they will be loved, safe, and cared for, to maintain psychological resilience. Parents that openly share their diagnosis with their children, tailoring the information to their developmental stage, and providing opportunities to explore emotions related to the illness, can help promote resilience and coping (Osborn 2007).

Conversely, lack of communication, and poor family functioning, are associated with increased levels of psychological distress in children, and some develop serious problems such as separation anxiety, anger, depression, sleep disturbance, difficulties with school, and low self-esteem (Hasson-Ohayon and Braun 2010, Morris et al 2016).

Parents are often the gatekeepers of essential information about their illness, and should be encouraged and supported by healthcare professionals to embrace an open style of communication with their family. However, evidence suggests that parents feel unsupported by professionals, and are offered limited advice on how to support, and communicate with, their children about their cancer (Elmberger et al 2000, Semple and McCance 2010).

Role of frontline oncology professionals

Frontline oncology healthcare professionals are well placed to empower parents to communicate with, and support, their children when diagnosed with cancer, and to manage the duality of being a patient and parent during cancer treatment. Despite this, however, there are barriers to staff’s ability to deliver this important aspect of care, including lack of knowledge and confidence in their skills, over-identification with families’ situations, poor support, and limited supervision, which compounds their feelings of distress and uncertainty (Turner et al 2007). Lack of education about how to provide this supportive care, can increase oncology professionals’ emotional distress, and affect their wellbeing (Fallowfield and Jenkins 2004). Targeted education is important for developing psychological resilience and positive coping strategies in staff (McCann et al 2013). Education for oncology healthcare professionals can help improve their wellbeing and job satisfaction (Girot and Albarran 2012), and improve supportive care for parents (O’Donovan and Poole 2016).

Increasing healthcare professionals’ confidence and competence to initiate discussions about parental cancer, and providing support with family-related issues, is vital for family cohesion and the reduction of psychosocial difficulties in the home [Grant et al 2016]. An educational intervention was developed and delivered to frontline oncology professionals to address the gap between parents’ need and desire for tailored, family-centred support, and oncology professionals’ lack knowledge, training opportunities, and confidence to deliver this important aspect of care.

Study aim

The aim of the study was to evaluate the effects of a face-to-face education session on oncology professionals’ perceived confidence and competence to communicate with patients about parental cancer. The specific objectives were to determine if frontline oncology professionals perceived that the sessions:

* Increased their knowledge about the support needs of families with parental cancer.
* Improved their confidence in supporting parents how to tell their children about parental cancer.
* Improved their competence in preparing parents to manage their children’s difficult questions surrounding parental cancer
* Influenced their practice when supporting parents who are newly diagnosed with cancer.

Methods

Development of the educational intervention

During the planning and developing of the educational intervention, attention was given to integrating theory with practice to promote clinical expertise. The content was derived from the experience of an expert team, which included an oncology nurse specialist, professor in cancer care, cancer nurse researcher, family support coordinator, a parent, and findings from recent empirical studies.

The education session was centred on the principles of cognitive, social, and modelling theory, to promote change of thought, feeling, and attitudes when professionals are supporting parents newly diagnosed with cancer. The delivery of the session incorporated aspects of advanced communication skills training and learning methods, to encourage participants to reflect on their attitudes to parents communicating their cancer diagnosis with their children, the role of healthcare professionals in empowering parents to communicate with their children, and the integration of case studies.

The education session incorporates the following topics:

* The importance of communicating with children about their parent’s cancer.
* Difficulties reported by oncology professionals when working with parents.
* The essential need to support parents diagnosed with cancer.
* How to start the conversation with parents.
* Guiding principles when talking to children about parental cancer.
* Finding the words, using a case example of a father with colorectal cancer, who required surgery and chemotherapy.
* Helpful tips when supporting families affected by parental cancer.

This was followed by an opportunity for participants to reflect on and share difficulties they have encountered, or might encounter, when communicating with parents newly diagnosed with cancer.

Delivery of the education session

The education sessions were delivered in a 30 to 40 minute, face-to-face format by the family support coordinator for Cancer Focus NI, a cancer charity that provides specialist support to help families cope with the effects of parental cancer, and an experienced clinical nurse specialist who is leading a programme of work on family-centred cancer care. The sessions were delivered during the daytime shift for oncology professionals in their clinical areas, for example chemotherapy units.

In many of the departments, sessions were organised in a roadshow style, with three in the morning, and three in the afternoon, to maximise the number of staff who could attend. Delivery was over nine months from January 2016 to September 2016.

Design

This study used a pre-post-test design. Given the lack of training courses on supporting parents with cancer, there was a consequent lack of appropriate, validated questionnaires. Therefore, an expert panel, comprising of two experienced researchers from a nursing and oncology background, a senior oncology nurse specialist, an academic in educational psychology, and a family support coordinator, developed a survey specifically for this study.

Careful consideration was given as to whether the survey should have single- or multi-item questions to measure the constructs of interest. Well-constructed, single-item questions can provide valuable, reliable and valid information, and are short and simple, therefore place less demands on respondents than multi-item measures (Streiner 2003), but on the other hand multi-items are more reliable and stable, while single-items are vulnerable to random measurement errors (Bowling 2004). Taking this into consideration, the expert panel decided to use single-item questions to optimise completion rates, but paid close attention to the wording of the questions, particularly the three single-item pre-post-test questions, to ensure the items covered the behaviour domain being tested. Each single-item was selected, reviewed, and refined for content and face validity.

The survey was piloted with a small group of healthcare professionals, who gave feedback on the structure and format of questions, and the length of data collection instrument. Apart from the first three demographic questions, all responses were rated on a Likert scale from 0=not at all, to 10= very much. The final version of the survey has 13-items (Box 1), and a free text section for additional comments. Anonymity was assured as professionals were not asked to provide their name or place of work.

Box 1: Evaluation survey



We would appreciate if you could complete the following evaluation survey by answering questions 1 to 6 before the education session and questions 7 to 13 after the education session

Before education session

1) Please tick the box below which best describes your professional background

Qualified nurse

Medical staff

Social worker

Allied health professional

Other, please state \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2) How many years have you worked with patients with cancer?

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_years

3) Have you had any formal training on supporting parents with cancer to communicate with, and manage their children?

Yes

No

4) How **confident** are you discussing, with a parent who has cancer, how to talk to their children about their diagnosis?

Not             Very

at all confident

0       1 2 3 4 5 6 7 8 9 10

5) How **confident** would you be at asking a parent 'what do your children know about your cancer?'

Not             Very

at all confident

0       1 2 3 4 5 6 7 8 9 10

6) How **competent** are you at helping a parent answer their child's question 'mum/dad are you going to die from cancer?'

Not             Very

at all competent

0       1 2 3 4 5 6 7 8 9 10

To be completed after the education session:

7) How **confident** would you be discussing, with a parent who has cancer, how to talk to their children about their diagnosis?

Not             Very

at all confident

0       1 2 3 4 5 6 7 8 9 10

8) How **confident** would you be asking a parent 'what do your children know about your cancer?'

Not             Very

at all confident

0       1 2 3 4 5 6 7 8 9 10

9) How **competent** do you feel you are at helping a parent answer their child's question 'mum/dad are you going to die from your cancer?'

Not             Very

at all competent

0       1 2 3 4 5 6 7 8 9 10

10) The training **increased my knowledge** of the support needs of parents and families with cancer

Not             Very

at all much so

0       1 2 3 4 5 6 7 8 9 10

11) I would recommend this education session to a colleague working in cancer care

Not             Very

at all much so

0       1 2 3 4 5 6 7 8 9 10

12) To what extent do you think this education session **will influence your practice** (use what you have learned from the training)?

Not             Very

at all much so

0       1 2 3 4 5 6 7 8 9 10

13) Other comments \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Thank you for taking the time to compete this evaluation

Participants and procedures

 Frontline oncology staff from nursing, medicine, social work, therapeutic radiography, physiotherapy, speech and language, and occupational therapy from the Northern Ireland Cancer Centre and all four cancer units in Northern Ireland, were invited to attend a 30 to 40 minute, face-to-face education session by the lead cancer service manager from their institution. An invitation template was provided that stated who would deliver the education, who could attend, the duration, venue, date, and the topics that would be covered.

In keeping with the Governance Arrangements for Research Ethics Committees (GAFREC) guidance (NHS Health Research Authority 2011) ethical approval was not required for this study, as the research was ‘limited to the involvement of NHS or social care staff recruited as research participants by virtue of their professional role’ on NHS premises. Consent was implied by the return of the questionnaires at the end of the education sessions.

Data analysis

Data were analysed in line with measurement type and research design, using SPSS 22.0. Descriptive statistics were generated for all items, and inferential statistics, including paired sample t-test and ANOVA, were used to examine the change over time across all participants, and the effect of demographic details on the change across time. Statistical significance is at p ≥ 0.05 level. Measures of skewness and kurtosis justify the use of parametric analysis.

Results

Sample characteristics

35 face-to-face education sessions were conducted across the five acute NHS trusts in NI, and the number of participants ranged from three to 15. 260 healthcare professionals attended the sessions, but one participant was excluded as they did not provide pre-test post-test scores, therefore the final sample was 259. With a sample of 259 participants, and a sample frame of 5,000 potential participants, the confidence interval for the items in the survey was 5.93 (95% confidence level) (<http://www.surveysystem.com)>.

Demographic details are given in Table 1. Approximately half the sample were registered nurses (57%, *n=*147), 23% (*n=*60) were allied health professionals (AHPs), and 5% (*n=*17) were social workers. Some of the subgroups had small numbers, such as medical staff (2%, *n=*5), therefore comparisons across professional backgrounds are limited.

Table 1: Demographic characteristics (*n=*259)

|  |  |  |
| --- | --- | --- |
| Demographic characteristics | Number of participants (*n=*259) | % |
| Professional backgroundRegistered nurseMedical staffAllied health professional (physiotherapist, radiographer, speech and language therapist)Social WorkerNursing studentOther | 147560171119 | 57%2%23%7%4%7% |
| Range of years working with cancer patients0 to 5 years6 to 11 years11 to 20 years20+ yearsMissing data | 10130713720 | 39%12%27%14%8% |
| Formal training in supporting families with parental cancerYesNo | 23236 | 9%91% |

Effect of face-to-face education session on perceived confidence and competence to communicate with parents about parental cancer (pre-post-test questions)

Using paired sample t-tests, there were statistically significant improvements in participants’ perception of their confidence and competence in communicating with parents about parental cancer after the education session, on the three, clinical scenario-based questions (p = <0.001) (Table 2).

Table 2: Effect of a face-to-face education session on perceived confidence and competence to communicate with parents about parental cancer (*n=*259)

|  |  |  |  |
| --- | --- | --- | --- |
| Question | Pre-training score | Post-training score | Sign |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Q1. How confident are you discussing, with a parent who has cancer, how to talk to their children about their diagnosis? | Mean 3.71  | Standard deviation 2.347 | Mean 6.62  | Standard deviation 1.826 | <0.001 |
| Q2. How confident would you be asking a parent 'what do your children know about your cancer?' | 4.92  | 2.79 | 7.25  | 1.91 | <0.001 |
| Q3. How competent are you helping a parent answer their child's question 'mum/dad are you going to die from cancer?' | 3.23  | 2.18  | 6.08  | 1.93 | <0.001 |

Participants had low mean scores, before the education session, concerning their perceived confidence in supporting parents with cancer to talk to their children about the diagnosis (mean score 3.71), and competence in helping parents answer their child’s question 'mum/dad are you going to die from cancer? (mean score 3.23). The mean scores for these questions increased by 2.91 and 2.82 respectively (Likert scale 0 to 10). Participants’ mean score also increased by 2.33 for the third question (Figure 1).

Figure 1: Pre- and post-training mean scores on perceived confidence and competence



On repeated measure ANOVA, the improvement in scores for all three clinical scenario-based questions was not determined by professional background, years of experience, or having received formal training in this area of practice. Notably, there was a statistically significant difference across professional background for the three pre-post-test questions at baseline, using one-way analysis of variance, but there was no significant difference for this demographic characteristic using repeated measure ANOVA. For example, nursing students and AHPs scored lowest at baseline on all three clinical scenario-based questions, and medical staff scored highest, but all professional subgroup scores increased in the same direction, with no statistically significant difference. In other words, despite differences in baseline scores, all participants’ confidence and competence increased in a similar way.

Perceptions that education session increased knowledge, recommend to colleagues, influence practice (single-item questions)

Immediately following the training, participants perceived that the face-to-face education session had increased their knowledge about the support needs of parents and families with cancer, and that it would influence their practice. They also reported that they would highly recommend this focused education session to colleagues in cancer care (Table 3). This demonstrates that participants considered that the training would positively influence their practice (mean score of 8.47 to this question, on a Likert scale of 0 to 10).

Table 3: Effect of face-to-face education session on knowledge, influencing practice, and recommending to others

|  |  |  |  |
| --- | --- | --- | --- |
| Question | Mean | Standard deviation | Range |

|  |  |  |  |
| --- | --- | --- | --- |
| The session **increased my knowledge** on the support needs of parents and families with cancer (*n=*259) | 8.26 | 1.58  | 1 - 10 |
| I would recommend this training to colleagues in cancer care (*n=*259) | 9.12 | 1.32 | 4 - 10 |
| To what extent do you think this session **will influence your practice** (use what you havelearned from the training (*n=*258)?Likert score 0=not at all; 10=very much so | 8.47 | 1.72 | 3 - 10 |

Post-hoc tests (least significant difference (LSD)) demonstrated no statistically significant difference in increased knowledge, recommending the session to colleagues, or influencing practice, according to years of experience, and previous formal training. However, there was a statistically significant difference between mean scores for staff nurses compared to nursing students on perception of knowledge gained, and whether they would recommend the session to others, with lower scores to both questions from nursing students (p = <0.001). It is possible that staff nurses working in oncology considered the session more relevant to their field of practice.

Finally, AHPs had a statistically lower mean score for how the session would influence their practice, compared to staff nurses (p=<0.001). It could be suggested that staff nurses working with people with cancer believed they have more opportunity to put the knowledge and skills gained into practice, compared to their AHP colleagues (Table 4).

Table 4: Post hoc test (least significant difference) on knowledge, influencing practice and recommending to other, relating to professional background

|  |  |  |
| --- | --- | --- |
| Question  | Professional background Mean score (SD)  | Sign |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| The session **increased my knowledge** on the support needs of parents and families with cancer (*n=*259) | Staff nurse8.6 (1.4)\*  | Medical staff7.4 (0.9) | Allied health professional7.8 (1.7) | Social worker8.0 (1.6) | Nursing student 6.8 (1.8) \* | Others 8.2 (1.5) | \* p = <0.001 |
| I would recommend this training to a colleague working in cancer care (*n=*259) | 9.3 (1.2)\*  | 8.4 (1.1) | 9.0 (1.4) | 8.9 (1.4) | 7.9 (1.9)\* | 9.1 (1.6)  | \* p =≤0.001 |
| To what extent do you think this session **will influence your practice** (use what you have learned from the training) (*n=*258)? | 8.9 (1.5)\*  | 7.8 (0.8)  | 7.7 (1.9)\* | 8.4 (1.5) | 7.9 (2.1) | 8.1 (2.1)  | \* p =<0.001 |

Over one-third of participants completed the free-text section, and responses were themed as increased knowledge, useful for practice, optimal delivery to enhance learning, and desire for more in-depth training. Responses were also overwhelmingly positive, for example ‘very beneficial session - all professionals should attend! Thank you’, and ‘thoroughly insightful and reflective’.

Discussion

The study supports previous empirical research, that suggests healthcare professionals lack confidence in their ability to offer instructive support to parents diagnosed with cancer, who have dependent children (Turner et al 2007, Grant et al 2016), due to low pre-test scores on all three clinical scenarios. This is concerning, as lack of confidence and self-efficacy in managing supportive care for this patient group can lead to fear of making the situation worse (Turner et al 2007), and increased levels of burnout (Emold et al 2011). The findings demonstrate a need for tailored educational interventions for healthcare professionals, on the effects and support needs of families affected by parental cancer, to minimise stress and burnout.

Effective communication skills, and confidence in delivering this aspect of care, is not an inevitable by-product of clinical experience. Half the participants had over five years’ experience of caring for people with cancer, yet this did not result in higher pre-test scores. Research by Fallowfield et al (2002), on the effectiveness of oncology healthcare professionals’ communication skills, supports this finding, and suggests that skills and confidence can be acquired through training and education.

Participants in this study were providing direct care to oncology patients, but less than 10% had previously attended training on this important aspect of care. This is worrying, as it is important to improve the emotional dimension of parent-staff communication. Recognition of the far-reaching consequences of poor communication, and lack of support for parents, underpins the need for government to commit to providing targeted education for oncology professionals, as an important approach to improving family-centred patient care. This core theme is outlined in Achieving World Class Cancer Outcomes: A Strategy for England 2015-2020 (NHS England 2015), which states ‘staff who come into contact with cancer patients have a responsibility to ensure that every conversation they have with a patient delivers the information and support required’.

The strategy emphasises the need for institutions to regularly review the training provided to NHS staff who have contact with cancer patients, to ensure they have access to appropriate learning and development opportunities. This should include education tailored to the support needs of parents with cancer who have young children. Having a skilled workforce reduces the need for these difficult conversations to be the sole responsibility of cancer specialists, and ensures that opportunities for meaningful communication with parents with cancer, at times of greatest need, are not missed. The NHS England cancer strategy (2015) supports making communication skills training available to all frontline oncology professionals, not just specialists and core members of multidisciplinary teams. This was an important consideration in the development and delivery of this educational intervention, and consequently it is relevant, and was offered to staff from all disciplines working in oncology.

To maximise participation, the education session was kept short and focused, and was delivered in the clinical areas to minimise disruption to daily work schedules. Longer and more intensive training might result in greater knowledge, skills, and self-efficacy, but it is unlikely that this would be achievable or sustainable in all cancer departments. In recognition of the time constraints and workload pressures on frontline staff, the study team is developing and testing the educational content as an e-learning module, and will compare it to face-to-face training.

Theory-driven, practice-orientated education, supports frontline oncology professionals to feel enabled, and confident, to deliver family-centred communication to parents diagnosed with cancer who have dependent children (Grant et al 2016). Following the education intervention in this study, participants’ perceived level of confidence and competence improved significantly. This suggests that providing focused education on managing issues related to families affected by parental cancer can increase oncology professionals’ knowledge and confidence, and promote family-centred communication and family cohesion. These outcomes should help address concerns that healthcare professionals are not engaging in, or initiating, these conversations.

Limitations

The study used a non-validated survey, as there is limited research within this area of practice, and therefore no suitable data collection instrument. However, the survey will be tested further when the educational intervention is evaluated in e-learning format.

The study used a pre-test post-test design and was not a randomised controlled trial, which means it is difficult to assert that improvements in participants’ perceived confidence and competence are a result of the educational intervention. Finally, it has not been established if the perceived changes have been sustained, as longitudinal data has not been collected. However, this will be tested in the next phase of this programme of work.

Conclusion

The educational intervention aimed to address the lack of training for oncology professionals in supporting families affected by parental cancer. Oncology professionals reported that the face-to-face education session increased their confidence and competence to communicate with, and empower parents diagnosed with cancer, surrounding the support needs of their children. Implications for practice are potentially far-reaching. Providing healthcare professionals with education and support can be beneficial for clinicians, in terms of reducing stress and burnout levels, and for parents and their children, in relation to creating more open communication at home, reducing the risk of psychological difficulties, and promoting greater family cohesion. Training like this must be based on sound educational principles, informed by evidence, and embedded in the clinical context.

Bowling A (2004) Just one question: if one question works, why ask several? Journal of Epidemiology and Community Health. 59, 5, 342-345.

<http://www.cancerresearchuk.org/health-professional/cancer-statistics/incidence/age#heading-Zero> (last accessed 9 May 2017). Cancer Research UK (2016) Cancer Incidence Statistics. <http://www.cancerresearchuk.org>

Emold C, Schneider N, Meller I et al (2011) Communication skills, working environment and burnout among oncology nurses. European Journal of Oncology Nursing. 15, 4, 358-363.

Elmberger E, Bolund C, Lützén K (2002) Men with cancer: changes in attempts to master the self-image as a man and as a parent. Cancer Nursing. 25, 6, 477-485.

Fallowfield L, Jenkins V, Farewell V et al (2002) Efficacy of a Cancer Research UK communication skills training model for oncologists: a randomised controlled trial. The Lancet. 359, 9307, 650-656.

Fallowfield L, Jenkins V (2004) Communicating sad, bad, and difficult news in medicine. The Lancet. 363, 9405, 312-319.

NHS Health Research Authority (2011) Governance Arrangements for Research Ethics Committees [www.hra.nhs.uk/resources/research-legislation-and-governance/governance-arrangements-for-research-ethics-committees/](http://www.hra.nhs.uk/resources/research-legislation-and-governance/governance-arrangements-for-research-ethics-committees/) (Last accessed: 2 May 2017)

Girot E, Albarran J (2012) Sustaining the education workforce in healthcare: challenges for the future. Nurse Education Today. 32, 1, 32-38.

Grant L, Sangha A, Lister S et al (2016) Cancer and the family: assessment, communication, and brief interventions - the development of an education programme for healthcare professionals when a parent has cancer. BMJ Supportive Palliative Care. 6, 4, 493-499.

Hasson-Ohayon I, Goldzweig G, Braun M et al (2010) Women with advanced breast cancer and their spouses: diversity of support and psychological distress. Psychooncology. 19, 11, 1195-2204.

Helseth S, Ulfseat N (2005) Parenting experiences during cancer. Journal of Advanced Nursing. 52, 1, 38-46.

Huizinga G, Van der Graaf W, Visser A et al (2003) Psychosocial consequences for children with a parent with cancer. Cancer Nursing. 26, 3, 195-202.

McCann C, Beddoe E, McCormick K et al (2013) Resilience in health professions: a review of recent literature. International Journal of Wellbeing. 3, 1, 60-81

Morris J, Martini A, Preen D (2016) The well-being of children impacted by a parent with cancer: an integrative review. Supportive Care in Cancer. 24, 7, 3235-3251.

NHS England (2015) Achieving World-Class Cancer Outcomes. A Strategy for England 2015-2000. Cancer Taskforce, Cancer Research UK <http://www.cancerresearchuk.org/about-us/cancer-strategy-in-england> (Last accessed: 2 May 2017.)

Niemelä M, Paananen R, Hakko H et al (2012) The prevalence of children affected by parental cancer and their use of specialized psychiatric services: the 1987 Finnish Birth Cohort study. International Journal of Cancer. 131, 9, 2117-2125.

O'DonovanA, Poole C (2016) Fink about it: development and evaluation of a communications curriculum for healthcare professionals. MedEdPublish. 5, 1, 16.

O’Neill C, McCaughan E, Semple CJ & Ryan AA (2013) Fatherhood and cancer: a commentary on the literature. European Journal of Cancer Care. 22, 161–168.

Osburn T (2007) The psychosocial impact of parental cancer on children and adolescents: a systematic review. Psychooncology. 16, 2, 101-126.

Semple C, McCance T (2010) Experience of parents with head and neck cancer who are caring for young children. Journal of Advanced Nursing. 66, 6, 1280-1290.

Semple C, McCaughan E (2013) Family life when a parent is diagnosed with cancer: impact of a psychosocial intervention for young children. European Journal of Cancer Care. 22, 2, 219-231.

**Streiner D,** Norman G (2003) Health Measurement Scales: A Practical Guide to their Development and Use. (Third edition). Oxford University Press, Oxford.

 [Syse](https://www.ncbi.nlm.nih.gov/pubmed/?term=Syse%20A%5BAuthor%5D&cauthor=true&cauthor_uid=22442635) A, Aas G, Loge J (2012) Children and young adults with parents with cancer: a population-based study. Clinical Epidemiology. 4, 41-52.

Turner J, Clavarino A, Yates P et al (2007) Oncology nurses’ perceptions of their supportive care for parents with advanced cancer: challenges and educational needs. Psychooncology. 16, 2, 149-157.

Weaver K, Rowland J, Alfano C et al (2010) Parental cancer and the family. Cancer. 116, 18, 4395-4401.